ASCON TECNOLOGIC

EVERYTHING UNDER CONTROL

CONTROL LOOP COMPONENTS CATALOGUE 2015

INDEX

COMPANY PROFILE

Ascon Tecnologic is an Italian company that develops, manufactures and commercializes a complete range of products for the regulation and automation of machinery and systems in the manufacturing and processing sectors as well as that of industrial and commercial refrigeration.
The group Ascon Tecnologic has more than 200 employees and, in its productive plants, realizes every year over a million of instruments.
Ascon Tecnologic operates in over 50 countries with 6 branches, its own agents and a distribution network, offering clients sales and after-sales assistance.

Manufacturing unit, Manaus (Brazil).

Headquarters, offices, R&D, Manufacturing unit, Vigevano (Italy).

QUALITY CERTIFICATION / SAFETY AND APPROVALS

Ascon Tecnologic S.r.l. has obtained the certification of "Quality System" in conformity to UNI EN ISO 9001:2008 released by the corporate certifier Det Norske Veritas Italy S.r.l.

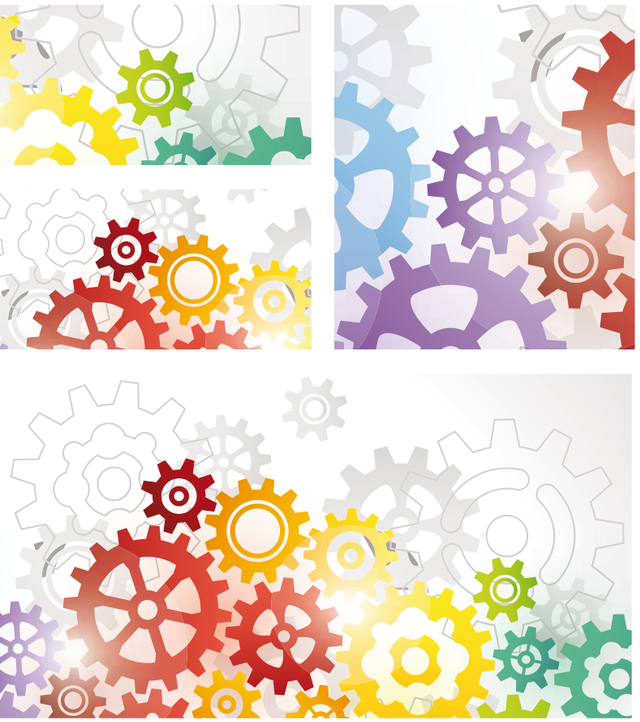
The instruments are developped for the use in conformity to the actual compliance, as concern the CE mark according to Directives 2006/95/CE (Low Voltage) and 2004/108/CE (EMC).
The applicable rules, according to the model, are:

Safety
- EN61010-1
- EN60730-1
- UL873 for use conforming as foreseen by Underwriters Laboratory Inc. (only for approved instruments).

EMC
EN61326-1

Remarks: please make reference to the documentation and the individual certifications for details of the applicable norms.

ACTUATORS



SOLID STATE RELAYS

Wide range of Solid State Relays with internal resin, able to ensure a longer life and greater reliability.
The SSR are widely used to control the temperature in the plastics, packaging, food processing, and HVAC industries.
Other applications include the lighting and control pumps.
Many relays have the possibility to control inductive loads, making them suitable for the control of motors in HVAC systems. In these systems, the static units proposed are ideal for replacing mechanical contactors, thanks to its high durability and the absence of noise during switching.
We also offer a full range of SSR with integrated heat sink.

SSR-

- SOLID STATE RELAY SINGLE PHASE IN AC
- ZERO-CROSSING SWITCHING
- WITH BUILT-IN LED AND VARISTOR

FEATURES

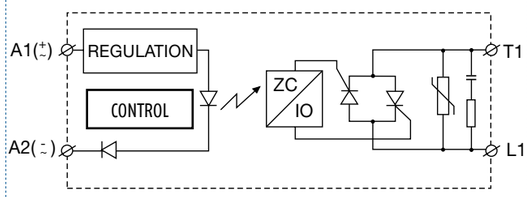
PRODUCT DESCRIPTION	SSR- (RM1A)		SSR- (RAM)
	The relay switching zero-crossing with antiparallel thyristor output is the solid state relay used in most industrial applications, thanks to the multiplicity of possible applications. This relay can be used for resistive, inductive and capacitive loads. The relay switching zero-crossing is activated when the voltage passes through zero and turns off when the current passes through zero. The cap provides protection against accidental contact up to IP 20. The output terminals with protection may contain cable up to 16 mm². The built-in varistor (RM1A) or the built-in filter (RAM) provide protection from voltage transients and the LED indicates the status of the control input.		
INPUT			
Control voltage	SSR23050D (3... 32 VDC)	SSR48050D (4... 32 VDC)	4... 32 VDC
Activation voltage @ Ta=25°C	SSR23050D (2.5 VDC)	SSR48050D (3.5 VDC)	3.5 VDC
Reverse Voltage	≤ 32 VDC		
OFF voltage	≤ 1.2 VDC		
Input current with max. input voltage	≤ 12 mA		
ON response time	≤ 1/2 cycle		
OFF response time	≤ 1/2 cycle		
OUTPUT			
Rated current AC 51 - AC53a	50 Arms - 15 Arms		25,50,75,100,125 Arms - 5,15,17,20,30 Arms depending on the model
Minimum operating current	250 mA		150 mA
Repetitive overcurrent t = 1 s	< 125 ACArms		< 55, 250, 400, 500 ACArms depending on the model
Non-repetitive overcurrent t=10 ms	600 A_p		325, 600, 800, 1150, 1900 A_p depending on the model
Leakage current at nominal voltages and frequencies	< 3 mArms		
I^2 t fusion t = 10 ms	≤ 1800 A^2s		≤ 525, 1800, 3200, 660, 18000 A^2s
Voltage drop at the nominal current	≤ 1.6 Vrms		
Critical switching dv / dt	1000 V/µs		
GENERAL			
Rated voltage	24... 265 VACrms, 42... 530 VACrms		42... 660 VACrms
Non-repetitive voltage	≥650 V_p or ≥1200 V_p		≥1200 V_p
Switching voltage for zero	≤ 10 V		
Rated frequency	45... 65 Hz		
Power factor	> 0.5 @ 230 V rated or > 0.5 @ 480 V rated		> 0.5 @ 600 V rated
Weight	60g		
Connections	Fixing screw M5 type		
Isolation between Input / Output and Output / Case	≥4000 VACrms		
Operating Temperature/ storage	-20... +70°C /-40... +100°C		-40... +80°C /-40... +100°C
Certifications and Compliance	CE, UL, cUL, CSA		

HOW TO ORDER

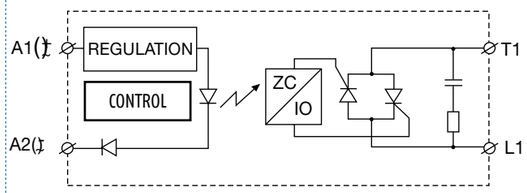
CODE	DESCRIPTION
SSR-23050D (RM1A23D50)	230V-50A-3... 32 VDC
SSR-48050D (RM1A48D50)	480V-50A-4... 32 VDC
SSR-60025D (RAM1A60D25 (Z)	600V-25A-4... 32 VDC
SSR-60050D (RAM1A60D50(Z)	600V-50A-4... 32 VDC
SSR-60075D (RAM1A60D75(Z)	600V-75A-4... 32 VDC
SSR-600100D (RAM1A60D100(Z)	600V-100A-4... 32 VDC
SSR-600125D (RAM1A60D125(Z)	600V-125A-4... 32 VDC

FUNCTIONAL DRAWING

SSR- (RM1A)

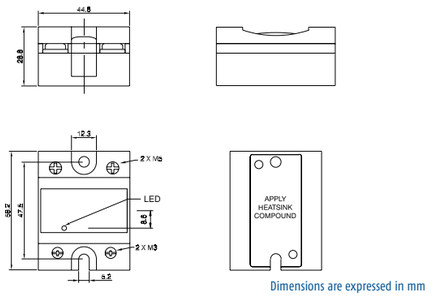


SSR- (RAM)



DIMENSIONS

SSR- (RM1A + RAM)



Dimensions are expressed in mm

SSRD

- SINGLE-PHASE SOLID STATE RELAY WITH BUILT-IN HEATSINK
- ZERO-CROSSING SWITCHING
- COMPACT SIZE

FEATURES

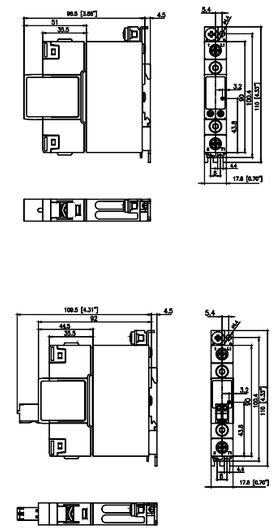
PRODUCT DESCRIPTION	SSRD (RGC)
	This new range of solid-state contactors represents a unique opportunity to maximize panel efficiency by ensuring a minimum footprint. The latest technologies contained in our semiconductor, allow a compact design with standard characteristics at 40°C. The smaller version 17.5 mm guarantees 20 ACA. The power terminals and control ensure a secure fixing. Overvoltage protection with integrated varistor. The below technical specifications are referred to an ambient temperature of 25°C.
INPUT	
Control voltage	4... 32 VDC or 5... 32 VDC for 85 A version
Maximum reverse voltage	3.8 VDC or 5 VDC for 85 A version
OFF voltage	1 VDC
Response time from ON	1/2 cycle + 500 µs @ 24 VDC
Response time from OFF	1/2 cycle + 500 µs @ 24 VDC
OUTPUT	
Rated current AC 51 a T=25°C	20... 85 ACA depending on the model
Minimum operating current	150... 400 mACA depending on the model
Non-repetitive overcurrent t = 10 ms	325... 1150 Ap depending on the model
Maximum leakage current	3 mA
I^2t fusion t = 10 ms	525... 6600 A^2s depending on the model
Critical switching dv / dt	1000 V/µs
GENERAL	
Rated voltage	600 V
Non-repetitive voltage	1200 V_p
Rated frequency	45... 65 Hz
Power factor	> 0.5 @ V rated
Weight	Approx. 260g
Connections	Screw/ Plug-in clamp
Operating Temperature/ storage	-40... +80°C (-40... +176°F)/-40... +100°C (-40... +212°F)
Certifications and Compliance	CE, UL, cUL listed, VDE

HOW TO ORDER

CODE	DESCRIPTION
SSRD 60020K (RGC 1A60D15KKE)	600V-20A-4... 32 VDC- Screw connection
SSRD 60023K (RGC 1A60D20KKE)	600V-23A-4... 32 VDC- Screw connection
SSRD 60030K (RGC 1A60D30KKE)	600V-30A-4... 32 VDC- Screw connection
SSRD 60040K (RGC 1A60D40KGE)	600V-40A-4... 32 VDC- Screw connection+ Plug-in clamp
SSRD 60060K (RGC 1A60D60KGE)	600V-60A-4... 32 VDC- Screw connection+ Plug-in clamp
SSRD 60085K (RGC 1A60D90GGEP)	600V-85A-5... 32 VDC- Plug-in clamp with overcurrent protection

DIMENSIONS

SSRD (RGC)



Housing width tolerance +0.5mm, -0mm...as per DIN43880.
All other tolerances ± 0.5mm.
All dimensions in mm.

Dimensions are expressed in mm

SSRF

- SINGLE-PHASE SOLID STATE RELAY WITH FUSE, FUSE AND VARISTOR
- ZERO-CROSSING SWITCHING

FEATURES

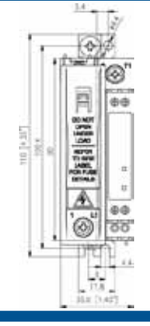
PRODUCT DESCRIPTION	SSRF (RGC1F)
	The solid state relay includes two functions in one device: switching and short circuit protection via fuse semiconductor. The front panel can be easily opened to ensure fast access to the fuse; the housing accepts several types of fuses for countless applications. The product has a width of 35 mm, a maximum voltage of 600 VAC and a current of 40 ACA. The technical specifications below refer to an ambient temperature of 25 ° C.
INPUT	
Control voltage	4.5... 32 VDC
Maximum reverse voltage	32 VDC
OFF voltage	1 VDC
Response time from ON	1/2 cycle
Response time from OFF	1/2 cycle
OUTPUT	
Rated current AC 51 @ T=40°C	20... 40 ACA depending on the model
Minimum operating current	0.2 A
Non-repetitive overcurrent t = 10 ms	325... 1150 Ap depending on the model
Maximum leakage current	3 mACA
I^2 t built-in fuse @ 690V (dimensions 14 x 51)	740... 3100 A^2s depending on the model
Critical switching dv / dt	1000 V/µs
GENERAL	
Rated voltage	600 VAC
Control voltage	4.5... 32 VDC
Rated frequency	45... 65 Hz
Power factor	0.5 @ V rated
Weight	Approx. 260g
Connections	Screw
Operating Temperature/ storage	-30... +80°C (-22... +176°F)/-40... +100°C (-40... +212°F)
Certifications and Compliance	CE, UL listed

HOW TO ORDER

CODE	DESCRIPTION
SSRF 60020 (RGC1F A60D20GGE)	600V-20A-4.5... 32 VDC
SSRF 60030 (RGC1F A60D30GGE)	600V-30A-4.5... 32 VDC
SSRF 60040 (RGC1F A60D40GGE)	600V-40A-4.5... 32 VDC

DIMENSIONS

SSRF (RGC1F)



Dimensions are expressed in mm

POWER CONTROLLERS

AE

The lines TH-S, TH-A , TH-AX and TH-P are able to meet various needs, offering a full range of single-phase power controllers, a passing phase and three-phase, with a wide choice of nominal voltages and currents.
The different operation modes, such as the phase angle, the wave train and MOSI for Super KANTAL, allow use with each type of load.
The functions of self-diagnosis and load monitoring ensure safe operation.

TH-S

- MICROPROCESSOR BASED POWER THYRISTOR
- FOR HEATING APPLICATIONS WITH RESISTANCES OR INFRARED

FEATURES

PRODUCT DESCRIPTION	TH-S
	TH-S is a static switch SCR microprocessor controlled and sized with the highest standards of safety. The continuous monitoring of the load, the power fuses integrated and the ability to connect to Fieldbus, allow its use as a standalone unit or with normal process controllers, PLC or any digital system. Owing to simple mounting, quick commissioning and safe operating, TH-S can be integrated easily into the wide field of applications in today's process technology, e.g.: - Automotive industry (e.g. paint drying equipment); - Chemical industry (pipe trace heaters, pre-heating equipment); - Furnace construction (industrial, diffusion, drying); - Glass processing (drying coatings); - Machine building industry (extruders, plastic presses); - Printing machines (IR drying); - Packaging industry (shrink tunnels).
GENERAL	
Rated voltage	230, 400, 500 VAC (-57... +10%)
Rated current	16, 30, 45, 60, 100, 130, 170, 280 A
Control input	Relay, voltage (DC)
Protection	Ultra-rapid fuse
Diagnostics	LED
Type of load	Resistive or infrared
Power circuit connection	Single-phase, three-phase two-phase controlled, three-phase with neutral, 3 x single phase
Operating temperature	Natural cooling: -10 ... + 45 ° C; Forced cooling: -10 ... + 35 ° C
Serial communication (optional)	Modbus RTU, PROFIBUS DPV1, Ethernet, CANopen, DeviceNet
Dimensions	(W x H x D): from 45 x 121 x 127 to 125 x 370 x 237 mm depending on the power
Compliance	UL

HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

TH-	CODE
VERSION	
Single-phase	1S
RATED VOLTAGE	
230 V	230
400 V	400
500 V	500
RATED CURRENT	
16 A	16
30 A	30
45 A	45
60 A	60
100 A	100
130 A	130
170 A	170
280 A (*)	280
TYPE	
Standard functions	H1
Standard functions + load monitoring + additional power supply 24V AC / DC + alarm relay	HRL1
Standard functions for 280A (*)	HF1
Standard functions+ load monitoring + additional power 24 VAC / DC +alarm relay for 280A (*)	HFRL1

Note: NOT all combinations are possible.
For more details please contact our sales department.

TECHNICAL DATA

	CURRENT (A)	POWER (KW)			DISSIPATION	DIMENSIONS			WEIGHT
		230 V	400 V	500 V	(W)	L	A	P	(KG)
	16	3.7	6.4	8	30	45	121	127	0.7
	30	6.9	12	15	47	45	121	127	0.7
	45	10	18	22.5	48	52	190	182	1.7
	60	14	24	30	80	52	190	182	1.7
	100	23	40	50	105	75	190	190	1.9
	130	30	52	65	150	125	320	237	4
	170	39	68	85	210	125	320	237	4
..F..	280	64	112	140	330	125	370	237	5

TH-A

- POWER CONTROLLER UP TO 1450 KVA
- TO CONTROL THE POWER OF HEATING ELEMENTS WITH HIGH / LOW TEMPERATURE COEFFICIENT

FEATURES

PRODUCT DESCRIPTION	TH-A
	The Thyristor power controller (SCR) TH-A, is used to transfer the required power to the load with precision, high reliability and speed, thanks to digital control technology evolved. The rational design and functionality of the controller TH-A, allow to satisfy a very wide range of applications. In the standard processes, the ductility, characterized by simple setting accessible to any user, provides quick and easy start-up. With the use of any fieldbus, many other functions enable to elevate the application range to significant tops. All electrical measurements, operating status and set point can be set and interrogated continuously, in aid of the automation process. TH-A becomes your perfect partner, raising the value of your application, in many fields, such as: - Automotive (painting and drying / drying); - Chemicals and Petrochemicals (Pipe Heating, heating and pre-heating in general); - Industrial Furnaces and not, of any type and power; - Production and processing of glass (merger; flat glass, wire, forming, finishing, fiberglass ...); - Manufacturing Industry (extruders, plastic presses); - Packaging (thermoforming); - Printing, Graphics (standard dryers, with IR or UV.); - Coating and Vacuum Coating
GENERAL	
Rated voltage	230, 400, 500, 600 VAC (-57... +10%)
Rated current	16, 30, 45, 60, 100, 130, 170, 280, 350, 495, 650, 1000, 1400, 1500 A
Functioning mode	Pulse full wave at variable cycle time (TAKT mode), half-wave pulses without component, continues QUICK TAKT (QTM - 1A only), phase angle (no 2A) (VAR mode)
Control input	0/4...20 mA (Ri 250 Ω), 0/1...5 V (Ri 44 kΩ), 0/2...10 V (Ri 88 kΩ), potentiometer: 5...10 kΩ
Protection	Ultra-rapid fuse
Diagnostics	LED
Type of load	Resistive, with transformer,at high temperature coefficient (6: 1) Rh/Rc
Power circuit connection	Single phase (1A), three-phase with 2 controlled phases (2A), with 3 controlled phases (3A)
Operating temperature	Up to 170 A: -10... + 45 ° C (natural ventilation), 280 A: -10... + 35 ° C (forced cooling)
Serial communication (optional)	Modbus RTU, PROFIBUS DPV1, Ethernet, CANopen, DeviceNet
Dimensions	(W x H x D): from 45 x 121 x 127 to 375 x 430 x 261 mm depending on the power
Compliance	UL

HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

TH-	CODE
VERSION	
Single Phase (Phase-Neutral; Phase-Phase) Operating modes: TAKT, VAR, QTM, VT	1A
Three-phase connection passing phase Operating Mode: TAKT	2A
Three-phase pure Operating modes: TAKT, VAR, VT	3A
RATED VOLTAGE	
230 V	230
400 V	400
500 V	500
600 V - TH-A...H RL1 - ...H RPL1 only	600
RATED CURRENT	
Pls. specify a value between 16 and 1500 A	----
TYPE	
Standard functions	H1
Standard functions + load monitoring and verification + Limits set + alarm relay + analog retransmission + additional power 24 VAC / DC + display output status.	HRL1
Functions as above but with control in power	HRLP1
Standard functions with forced ventilation 280A	HF1
Standard functions as HRL1 but with forced ventilation	HFRL1
Functions as above but with power control	HFRLP1

Note: NOT all combinations are possible.
For more details please contact our sales department.

TECHNICAL DATA TH-1A

	CURR (A)	POWER (KW) 230 V	400 V	500 V	600 V	DISS. (W)	DIMENSIONS L	H	D	WGH (KG)
	16	3.7	6.4	8	-	30	45	131	127	0.7
	30	6.9	12	15	-	47	45	131	127	0.7
	45	10	18	22.5	-	48	52	190	182	1.7
	60	14	24	30	-	80	52	190	182	1.7
	100	23	40	50	-	105	75	190	190	1.9
	130	30	52	65	-	150	125	320	237	4
	170	39	68	85	-	210	125	320	237	4
..F..	280	64	112	140	-	330	125	370	237	5
..F..	350	80	140	175	-	390	125	400	261	8.4
..F..	495	-	198	247	297	603	112	414	345	15
..F..	650	-	260	325	390	726	112	414	345	15
..F..	1000	-	400	500	600	1396	239	729	516	35
..F..	1400	-	-	700	840	1815	239	729	516	35
..F..	1500	-	600	-	-	1855	239	729	516	35

TECHNICAL DATA TH-2A

	CURR (A)	POWER (KW) 230 V	400 V	500 V	600 V	DISS. (W)	DIMENSIONS L	H	D	WGH (KG)
	16	-	11	14	-	60	90	131	127	1.4
	30	-	21	26	-	94	90	131	127	1.4
	45	-	31	39	-	96	104	190	182	3.4
	60	-	42	52	-	160	104	190	182	3.4
	100	-	69	87	-	210	150	190	190	3.8
	130	-	90	112	-	300	250	320	237	8
	170	-	118	147	-	420	250	320	237	8
..F..	280	-	194	242	-	660	250	393	237	11
..F..	350	-	242	303	-	780	250	430	261	16.7
..F..	495	-	343	429	514	1206	194	380	345	22
..F..	650	-	450	563	675	1453	194	380	345	22
..F..	1000	-	693	866	1039	2811	417	685	516	54
..F..	1400	-	-	1212	1454	3451	417	685	516	54
..F..	1500	-	1039	-	-	3531	417	685	516	54

TECHNICAL DATA TH-3A

	CURR (A)	POWER (KW) 230 V	400 V	500 V	600 V	DISS. (W)	DIMENSIONS L	H	D	WGH (KG)
	16	-	11	14	-	90	135	132	127	2.1
	30	-	21	26	-	141	135	132	127	2.1
	45	-	31	39	-	144	156	190	182	5.1
	60	-	42	52	-	240	156	190	182	5.1
	100	-	69	87	-	315	225	190	190	5.7
	130	-	90	112	-	450	375	320	241	12
	170	-	118	147	-	630	375	320	241	12
..F..	280	-	194	242	-	990	375	397	241	15
..F..	350	-	242	303	-	1170	375	430	261	25.5
..F..	495	-	343	429	514	1822	276	407	345	30
..F..	650	-	450	563	675	2192	276	407	345	30
..F..	1000	-	693	866	1039	4127	583	685	516	74
..F..	1400	-	-	1212	1454	5086	583	685	516	74
..F..	1500	-	1039	-	-	5206	583	685	516	74

TH-AX

- POWER CONTROLLERS WITH RATED VOLTAGE FROM 24 V
- WITH POWER CONNECTIONS FROM THE TOP AND/OR BOTTOM

FEATURES

POWER DESCRIPTION	TH-AX
	The TH-AX line manages voltages from 24 to 600 V with a current 16 to 1.500 A in a single product, single phase, three phase pure and with passing phase. Flexible Connection technology enables power connections from the top and from the bottom, in all combinations desirable, allowing exceptional ergonomics in the realization of the electrical panel. AE is the first manufacturer to use a graphical touchscreen display in a power controller, allowing to significantly increase the operational simplicity. There are new options to simplify the display and parameterization. All parameters are shown in text, while further operator messages are indicated by changes in the display backlight. In addition to the standard communication interfaces, are now present Ethernet and USB ports. Via the USB port is possible to parameterize TH-AX also with device switched off. Alternatively, are possible parameterization and display by the browser.
GENERAL	
Rated voltage	From 24 to 253(230), 440(400), 550(500), 660(600) VAC
Rated current	16, 30, 45, 60, 100, 130, 170, 230, 280, 350, 495, 650, 1000, 1400, 1500 A
Auxiliary supply	100... 240 VAC
Functioning mode	Pulse full wave at variable cycle time (mode TAKT), half-wave pulses without component, QUICK continues TAKT (QTM - 1AX only), phase angle (no 2AX) (VAR mode)
Inputs	2 x 0/4...20 mA (Ri 250 Ω), 0/1...5 V (Ri 44 kΩ), 0/2...10 V (Ri 88 kΩ), potentiometer: 5...10 kΩ
Outputs	3 analog outputs for retransmission
Protection	Ultra-rapid fuse
Touch screen	Two color
Diagnostics	From the display - direct check of fuses rupture
Type of load	Resistive, with transformer, at high temperature coefficient (6:1) Rh/Rc
Power circuit connection	Single phase (1AX), three-phase with 2 controlled phases (2AX), with 3 controlled phases (3AX)
Additional functions	Learning load resistance (teach-in) Wizard Configuration (Easy Start) Data logger with RTC (64 events)
Operating temperature	Up to + 40°C (natural ventilation or forced cooling) - Water cooling setting
Serial communication (optional)	Modbus RTU, PROFIBUS DPV1, Ethernet, CANopen, DeviceNet
Dimensions	(W x H x D): from 45 x 199 x 190 to 110 x 276 x 235 mm depending on the model
Compliance	UL approval under test

HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

TH-	CODE
VERSION	
Single Phase Operating modes: TAKT, VAR, QTM, SWITCH	1A
Three-phase connection passing phase Operating Mode: TAKT, SWITCH	2A
Three-phase pure Operating modes: TAKT, VAR, SWITCH	3A
RATED VOLTAGE	
24... 253 V	230
24... 440 V	400
24... 550 V	500
24... 660 V	600
RATED CURRENT	
Pls. specify a value between 16 and 1500 A	----
TYPE	
Standard functions + integrated ultra-rapid fuses + alarm relay + load monitoring, including retransmission outputs for power control	HRLP2
Standard functions as HRLP2 but with forced ventilation	HFRLP2

Note: NOT all combinations are possible.
For more details please contact our sales department.

TECHNICAL DATA TH-1AX

CURRENT (A)	POWER (KW)				DIMENSIONS			WGH (KG)	FUSE F1
	230 V	400 V	500 V	600 V	L	A	P		
16	3	6	8	-	45	196	193	1.1	20
30	7	12	15	-	45	196	193	1.1	40
45	10	18	22	27	52	276	238	2.2	63
60	14	24	30	36	52	276	238	2.2	80
100	23	40	50	60	54	276	238	2.8	200
130	30	52	65	78	129	361	283	7.8	200
170	39	68	85	102	129	361	283	7.8	315
230	53	92	115	-	129	373	283	8.3	315
240	-	-	-	138	129	373	283	8.3	315
280	64	112	140	168	129	373	283	8.3	350
350	80	140	175	210	129	373	283	8.3	500
1000	-	400	-	-	285	550	565	33.5	2 X 1000
1400	-	-	500	600	285	550	565	33.5	4 X 900
1500	-	600	700	840	285	550	565	33.5	4 X 900

TECHNICAL DATA TH-2AX

CURRENT (A)	POWER (KW)			DIMENSIONS			WGH (KG)	FUSE F1
	400 V	500 V	600 V	L	A	P		
16	11	14	-	90	196	193	2.2	20
30	21	26	-	90	196	193	2.2	40
45	31	39	47	108	276	238	4.4	63
60	41	52	62	108	276	238	4.4	80
100	69	86	104	110.2	276	238	5.6	200
130	90	112	135	250	361	283	15.6	200
170	117	147	176	250	361	283	15.6	315
230	159	199	-	250	373	283	16.6	315
240	194	-	239	250	373	283	16.6	315
280	242	242	-	250	373	283	16.6	350
350	693	303	363	452	373	283	16.6	500
1000	-	866	1039	452	550	565	53	2 X 1000
1400	-	1212	1455	452	550	565	53	4 X 900
1500	1039	-	-	452	550	565	53	4 X 900

TECHNICAL DATA TH-3AX

CURRENT (A)	POWER (KW)			DIMENSIONS			WGH (KG)	FUSE F1
	400 V	500 V	600 V	L	A	P		
16	11	14	-	135	196	193	3.3	20
30	21	26	-	135	196	193	3.3	40
45	31	39	47	164	276	238	6.6	63
60	41	52	62	164	276	238	6.6	80
100	69	86	104	164	276	238	8.4	200
130	90	112	135	375	361	283	23.4	200
170	118	147	176	375	361	283	23.4	315
230	159	199	-	375	373	283	24.9	315
240	194	-	239	375	373	283	24.9	315
280	242	242	291	375	373	283	24.9	350
350	693	303	363	375	373	283	24.9	500
1000	-	866	1039	618	550	565	72	2 X 1000
1400	-	1212	1455	618	550	565	72	4 X 900
1500	1040	-	-	618	550	565	72	4 X 900

TH-P

- HIGH PERFORMANCE POWER CONTROLLERS
- TO CONTROL THE POWER OF HEATING ELEMENTS WITH HIGH / LOW TEMPERATURE COEFFICIENT

FEATURES

PRODUCT DESCRIPTION	TH-P
	TH-P is the most advanced controller of the range, born of forty years'experience of AEG in the control of electrical power. Starting from different operation modes, through the multiple connections available for the process and automation systems and using the extreme accuracy guaranteed by the 32-bit RISC processor, TH-P, in fact, redefines the standard of SCR Power Controllers. The power controller TH-P can be used anywhere you need precise control of voltage, current or power. With the use of the patented mode DASM, multiple controllers TH-P can be synchronized to intelligently reduce absorption peaks obtained from the mains. Despite the completeness, its simple use makes it suitable for a wide range of applications, such as: Production and processing of glass (melting, glass, forming, finishing, glass fiber ...); Industrial furnaces of any type and power; Engineering; Coating processes and printing; Chemicals and petrochemicals; Pharmaceutical Industry; Automotive (painting and drying); Manufacturing Industry (extruders, plastic presses); Pipe Heating, Heaters; Heating and Drying UV and IR; Industrial Packaging (thermoforming). The parameters are divided in simple menu; the set point and the measured variables are transmitted back from the analog outputs or the numerous optional fieldbus. Moreover, thanks to the continuous development of SCR employees, power controllers TH-P can handle currents up to 2900 A and voltages of up to 690 V, with standard models.
GENERAL	
Rated voltage	P400: 230V -15%... 400 +10%, P500: 230V -15%... 500 +10%, P690: 500V-15%... 690 +10%
Rated current	400, 500 V: 37, 75, 110, 130, 170, 280, 495, 650, 1000, 1500 A (3P: 1850, 2600), (2P: 2000, 2750),(1P: 2100, 2900), 690 V: 80, 200, 300, 500, 780, 1400 (3P: 1700, 2200), (2P: 1850, 2400), (1P: 2000, 2600) A
Functioning mode	Wave trains (TAKT), shutter phase (VAR), softstart-softdown (SSSD), MOSI
Inputs	2 x 0/4...20 mA, 0/1...5 V, 0/2...10 V
Uscite di ritrasmissione valori regolati	3 outputs, configurable as 0/4 ... 20 mA or 0 ... 10 V
Diagnostics	Status display: 6 LED reprogrammable by the user Indication of anomalies: via LED, three alarm relays and LCD display Data logging of error events
Type of load	Resistance at high or low temperature coefficient (RC/RF up to 20), transformers, inductive loads
Power circuit connection	Single-phase (1P), three-phase with two controlled phases (2P), three-phase with three-phase controlled (3P)
Control type	V voltage, V^2 voltage, current I, I^2 current, VxI power Control accuracy: ± 0.5% Limitations: voltage Vrms, Irms current, P power, MOSI
Options	Local display with integrated keyboard (LBA) Front panel display installation Thyro-Power Manager Thyro-Tool Family Fieldbus Bluetooth interface
Operating temperature	Up to 170 A: -10 ... + 45 ° C (natural ventilation), 280 A: -10 ... + 35 ° C (forced cooling)
Serial communication (optional)	Modbus RTU, PROFIBUS DPV1, DeviceNet, RS232, fiber optic, wireless fieldbus
Dimensions	(W x H x D): from 150 x 320 x 229 to 603 x 1094 x 470 mm depending on the model
Compliance	Certifications: CE, UL (up to 650 A), GOST

HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

TH-	CODE
VERSION	
Single Phase Operating modes: TAKT, VAR, SSSD	1P
Three-phase connection passing phase Operating Mode: TAKT, SSSD	2P
Three-phase pure Operating modes: TAKT, VAR, SSSD	3P
RATED VOLTAGE	
230... 400 V	400
230... 500 V	500
500... 690 V	690
RATED CURRENT	
Pls. specify a value between 37 and 2600 A	----
TYPE	
Standard functions	HASM
Standard functions as H but for current ≥ 280A	HFASM

Note: NOT all combinations are possible.
For more details please contact our sales department.

OPTIONS

LOCAL DISPLAY WITH INTEGRATED KEYBOARD (LBA)
Removable, parameter setting via menu, Download / Up-load configuration, display, graphic LCD 7x19 digits.
FRONT PANEL DISPLAY INSTALLATION
Kit for remote display LBA.
THYRO-POWER MANAGER
TPM is a useful additional board to optimize the absorption of the network if you are using multiple power controllers. Implements multiple functions and additional measuring inputs. TPM is an alternative to option ASM.
THYRO-TOOL FAMILY
Utility Software with download functions, upload and data storage, editing and comparison of operating parameters, display of numerical and graphical values with data storage and printing. It manages multiple Power Controller simultaneously, up to max 998 TH-P.
FIELDBUS
Interfaces can be inserted into slots inside the controller. Main bus available: Profibus DP, Modbus RTU, DeviceNet, ProfiNET, ModBus TCP, Ethernet IP.
BLUETOOTH INTERFACE
The adapter is installed directly on TH-P, replacing the keyboard LBA. It can also be placed on the front panel, via the adapter SEK. The Bluetooth interface can be managed by: - Smartphone with Android OS - Tablet PC with Android operatingsystem - Laptop PC with software - Thyro-Tool Family (from version 4.0)

CONTROL VALVES

Electric and pneumatic

- Flow control
- Mixing
- Distribution
- Steam converting
- Boiler-feed pump protection
- Bottom blow-down
- Heating, ventilation and conditioning

in different versions and with a full set of accessories.

VM

- WITH ELECTRIC ACTUATOR
- WITH RECIRCULATION CONNECTION
- WITH EMERGENCY CLOSING
- STEAM CONVERTING VALVES
- BOTTOM BLOW-DOWN VALVES

FEATURES





GENERAL	VM				
Code	VM xIxx; VM xAxx; VM xHxx; VM xRxx; VM xUxx; VM x9xx	VM xA81 VM xH81	VM xxxx + ST 615x	VM xx5x	VM xA91
Appplication	Electric control valves for throttling, mixing and distribution of liquids, steams and gases in two-way and three-way design.	Control valves for feed water control system of steam boilers with protection of boiler-feed pump for falling bellow minimum flow rate.	Emergency closing device for motorized valves. Approved by TÜV as an actuator for water and steam with safety function in heating systems.	Steam converting valves. Pressure reduction with simultaneously cooling by water injection.	Bottom blow-down valves and continuous blow-down valves. Special valves for boiler application.
MECHANICAL					
Diameter and rated pressure	DN 15... 400, PN 16... 160 1... 12", ANSI# 150... 900	DN 25... 80, PN 40	--	DN 40... 250, PN 40... 100	DN 15... 65, PN 40 1... 2 1/2", ANSI# 300
Body materials	EN-GJL-250 (GG 25) EN-GJS-400-18-LT (GGG 40.3) EN-GP-240-GH (GS-C 25) EN-G17 CrM055 (1.7357) EN-GX5CrNiM019-11-2 (1.4408)				
Spindle packing	Chevron rings PT FE/graphite, packing graphite, DVGW approval, bellows seal with safety stuffing box				
Cone types	Parabolic cone, perforated cone, V-port cone, mixing cone, diverting cone				
Accessories	Positioner; Limit switches; Potentiometer; Pressure reduction air filter; Solenoid valve ; Booster valve.				

CE

HOW TO ORDER

Code structure : VM - AB CDE / FGH / JKLM / NPQR XY

HOW TO ORDER EXAMPLE

VM - 2A 110 / J0A / 0020 / 6120 02

DESCRIPTION

Electric valve
Power supply: 230V Actuator: ST5112-32 3kN 0.26 mm/s,
2 ways, Stuffing box PTFE/Graphite/
Accessories: standard/DN25 Kvs: 9.2,
Kvs: std., PN16/EN-GJL-250/
Cone parabolic/equal%,
Seat: std.,
Flange: ANSI 150" RF,
Special: none/
Positioner: RE3447,
Control signal: 4... 20 mA,
Action: NO, Accessories: none,/
Actuator rotated 180°

Note: to obatain the complete HOW TO ORDER, pls. get in touch with our sales department.

WARNING!
To properly identify the valve, you have to let us know the W.Nr. or the S/N (serial number) that are punched in the upper left on the aluminum plate placed on the valve body.

VP

- WITH ELECTRIC ACTUATOR
- STEAM CONVERTING VALVES
- BOTTOM BLOW-DOWN VALVES

FEATURES			
GENERAL		VP	
Code	VP xAxx; VP xCxx; VP xFxx; VP xHxx; VP xNxx; VP x9xx	VP xx5x	VP xC91
Application	Electric control valves for throttling, mixing and distribution of liquids, steams and gases in two-way and three-way design.	Steam converting valves. Pressure reduction with simultaneously cooling by water injection.	Bottom blow-down valves and continuous blow-down valves. Special valves for boiler application.
MECHANICAL			
Diameter and rated pressure	DN 15... 400, PN 16... 160 1... 12", ANSI# 150... 900	DN 40... 250, PN 40... 100	DN 15... 65, PN 40 1... 2 1/2", ANSI# 300
Body materials	EN-GJL-250 (GG 25) EN-GJS-400-18-LT (GGG 40.3) EN-GP-240-GH (GS-C 25) EN-G17 CrM055 (1.7357) EN-GX5CrNiMo19-11-2 (1.4408)		
Spindle packing	Chevron rings PT FE/graphite, packing graphite, DVGW approval, bellows seal with safety stuffing box		
Cone types	Parabolic cone, perforated cone, V-port cone, mixing cone, diverting cone		
Accessories	Positioner; Limit switches; Potentiometer; Pressure reduction air filter; Solenoid valve ; Booster valve.		

CE

HOW TO ORDER

Code structure : VP - AB CDE / FGH / JKLM / NPQR XY

HOW TO ORDER EXAMPLE

VP - 0D 110 / M1K / 0000 / 1410 --

DESCRIPTION

Pneumatica valve
Handwheel: none, Actuator: ST6160.a6-6g 530 cm², 0.8... 2.8 bar,
2 ways, Stuffing box PTFE/Graphite
Accessories: std/
DN50 Kvs: 9.2, Kvs: not std., PN40/EN-GP240-GH/
Cone: Parabolic equal%,
Seat: std., Flange: DIN,
Special: none/
Positioner: SRP981 -0.2... 1.0 bar,
Control signal 0.2... 1.0 bar, Action: NC,
Accessories: none,/
No special endcoding added

Note: to obatain the complete HOW TO ORDER, pls. get in touch with our sales department.

WARNING!
To properly identify the valve, you have to let us know the W.Nr. or the S/N (serial number) that are punched in the upper left on the aluminum plate placed on the valve body.

ET7/ET8

- THREADED VALVES
- WITH ACTUATOR 500 N AND 1000 N

FEATURES

GENERAL	ET7	ET8
Application	Heating, ventilation and air conditioning Mechanical manual control (optional) Auto-calibrating proportional model	Heating, ventilation and air conditioning Mechanical manual control (standard) Ride from 7 to 25 mm Auxiliary contacts from 2 kΩ Auto-calibrating proportional model
MECHANICAL		
Diameter	DN 15... 20	DN 25... 50
Body type	2 way PDTC-NO, 2 way PDTO-NC, 3 way mixing	
Thread	Parallel thread	
Model	Stainless steel or brass finishing, linear or equal%	
Stem type	Threaded	
Actuator	VA 7700 (500 N)	VA 7810 (1000 N)
Control	Floating, proportional + manual/electric control	Floating, proportional
Control signal	With or without manual/mechanical control	--
Mounting	Actuator mounted	
Options	--	2 auxiliary contacts, potentiometer 2 K Ω
ELECTRICAL		
Power supply	24 VAC, 230 VAC	

HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

ET7	CODE
	ET
BODY TYPE	
2 way PDTC-NO	2
2 way PDTO-NC	4
3 way mixing	8
THREAD	
Parallel thread	0
MODEL	
Brass finishing equal%	1
Brass linear finishing	2
Inox finishing equal%	3
Inox linear finishing	4
DN/KVW	
DN15/0.25	A
DN15/0.4	B
DN15/0.63	C
DN15/1.0	D
DN15/1.6	E
DN15/2.5	F
DN15/4.0	G
DN20/6.3	L
STEM TYPE	
Threaded stem	T
ACTUATOR	
VA 7700	VA77
CONTROL SIGNAL	
Without manual/mechanical control	0
With manual/mechanical control	4
CONTROL	
Floating	0
Proportional + manual/electric control	6
POWER SUPPLY	
24 VAC	1001
230 VAC	1003
MOUNTING	
Without actuator	-
Actuator mounted	M

HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

ET8	CODE
	ET
BODY TYPE	
2 way PDTC-NO	2
2 way PDTO-NC	4
3 way mixing	8
THREAD	
Parallel thread	0
MODEL	
Brass finishing equal%	1
Brass linear finishing	2
Inox finishing equal%	3
Inox linear finishing	4
DN/KVW	
DN25/10	N
DN32/16	P
DN40/25	R
DN50/40	S
STEM TYPE	
Threaded stem	T
ACTUATOR	
VA 7810	VA78
CONTROL	
Floating	A
Proportional	G
POWER SUPPLY	
230 VAC	D
24 VAC	G
OPTIONS	
No options	A
2 auxiliary contacts	C
Potentiometer 2K Ω	H
STEM TYPE	
Threaded	11
MOUNTING	
Without actuator	-
Actuator mounted	M

SERVOMOTORS

Electric rotary actuators

Drive and control of:
- modulating valves
- butterfly valves
- shutters
- other actuators with angular positioning within 90° or 180°.

SEF/SBF

• FLOATING SERVOMOTORS
UP TO 20 NM OR 5 NM TORQUE

FEATURES

MECHANICAL	SEF	SBF
Body and cover	Die-cast Aluminum	
Rated torque	4... 20 Nm	3... 5 Nm
Maintenance torque	4... 20 Nm	2.5... 5 Nm
Rotation torque	7... 120 s for 90°	7.5... 120 s at 50 Hz
Rotation Angle	Adjustable - Standard 90°	
Shaft	9.5 mm², squared	Ø 10 mm
FUNCTIONAL		
Functioning	Continuous 100%	
GENERAL		
Power supply	24, 115, 230 VAC (50/60 Hz)	
Power consumption	Approx. 4... 7 VA	Approx. 4... 7 VA
Dimensions / Weight	Approx. 2.5 kg	Approx. 1.7 Kg
Cable glands	2 x Pg 13.5	
Mounting	In any position	
Electrical protection	IP54, according to IEC 529 or IP65 optional	
Operating temperature	- 10... +60°C	
ACCESSORIES		
Potentiometer	1 potentiometer from 150 Ω to 2.5 kΩ	1 or 2 potentiometer from 150 Ω to 2.5 kΩ
Position indicator	Mechanical	
Auto/Man Control station and Open/Stop/Close Switch	Available	
Microswitches (optional)	2 auxiliary adjustable with free voltage contacts	2 auxiliary adjustable with free voltage contacts
Auxiliary shaft	Ø 8 mm (max. 3 Nm)	--
Connector	Multipolar for electrical connections	--

CE

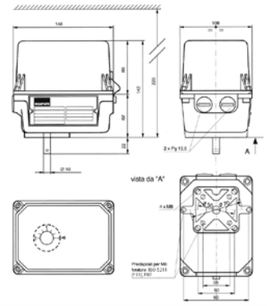
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

SEF	CODE
POWER SUPPLY	
24 VAC ±10% (50/60 Hz)	A
115 VAC ±10% (50/60 Hz)	B
230 VAC ±10% (50/60 Hz)	C
ROTATION TORQUE / RATED TORQUE / STATIC TORQUE	
7.5 a 90° / 4 Nm / 4 Nm	0
15 a 90° / 7 Nm / 7 Nm	1
30 a 90° / 15 Nm / 11 Nm	2
60 a 90° / 20 Nm / 20 Nm	3
120 a 90° / 20 Nm / 20 Nm	4
FEEDBACK POTENTIOMETER	
Not available	00
1 potentiometer 150 Ω	11
1 potentiometer 1 kΩ	13
1 potentiometer 2.5 kΩ	15
1 potentiometer 5 kΩ	16
1 potentiometer 1 kΩ	18
2 potentiometers 2.5 kΩ	25
AUXILIARY MICRO	
Not available	0
2 units	2
ACCESSORIES	
Multipolar connectors	-M
Local Auto/Man Control station and Open/Stop/Close Switch	-S
IP65 Cable glands	-Z
Rotation 160°	16
Rotation 180°	18
Auxiliary shaft Ø 8 mm	A1
Auxiliary shaft 9.5 mm	A2
Flange F4	F4
Clockwise rotation	DX
Relay control (ON/OFF)	R1
More options together For ex: Code SM=option -M+ option -S	MIX

DIMENSIONS

SEF



Dimensions are expressed in mm

HOW TO ORDER

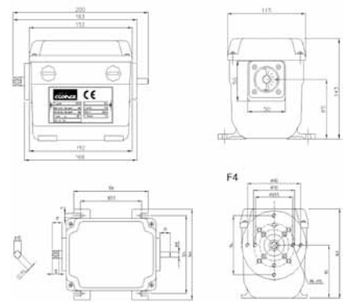
To compose the part number, pls. choose one of the option for each variable

SBF	CODE
POWER SUPPLY	
24 VAC ±10% (50/60 Hz)	A
115 VAC ±10% (50/60 Hz)	B
230 VAC ±10% (50/60 Hz)	C
ROTATION TORQUE / RATED TORQUE / STATIC TORQUE	
7.5 a 90° / 3 Nm / 2.5 Nm	0
15 a 90° / 3 Nm / 2.5 Nm	1
30 a 90° / 3 Nm / 2.5 Nm	2
60 a 90° / 5 Nm / 3 Nm	3
120 a 90° / 5 Nm / 3 Nm	4
FEEDBACK POTENTIOMETER	
Not available	00
1 potentiometer 150 Ω	11
1 potentiometer 1 kΩ	13
1 potentiometer 2.5 kΩ	15
1 potentiometer 5 kΩ	16
1 potentiometer 1 kΩ	18
2 potentiometers 2.5 kΩ	25
AUXILIARY MICRO	
Not available	0
2 units	2
ACCESSORIES	
Not available	--
Local Auto/Man Control station and Open/Stop/Close Switch	-S
Mechanical position indicator on the cover	-0
IP65 Cable glands	-Z
Rotation 180°	18
Clockwise rotation	DX
Relay control (ON/OFF)	R1

Note: on the auxiliary shaft the max. torque is 3 Nm to be subtracted to the rated torque.

DIMENSIONS

SBF



Dimensions are expressed in mm

SED/SBD

• DIGITAL SERVOMOTORS
UP TO 20 NM OR 5 NM TORQUE

FEATURES

MECHANICAL	SED	SBD
Body and cover	Die-cast Aluminum	
Rated torque	4... 20 Nm	3... 5 Nm
Maintenance torque	4... 20 Nm	2.5... 3 Nm
Rotation torque	7.5... 60 s for 90° at 50 Hz	15.30... 60 s at 50 Hz
Rotation Angle	Adjustable - Standard 90°	
Shaft	9.5 mm², squared	Ø 10 mm
INPUTS		
Input signal	4... 20 mA or 0... 10 VDC	
OUTPUTS		
Output signal	4... 20 mA or 0... 10 VDC	0... 10 VDC
FUNCTIONAL		
Functioning	Continuous 100%	
GENERAL		
Power supply	24, 115, 230 VAC (50/60 Hz)	
Power consumption	Approx. 7 VA	Approx. 4... 7 VA
Dimensions / Weight	Approx. 2.5 kg	Approx. 1.7 Kg
Cable glands	2 x Pg 13.5	
Mounting	In any position	
Electrical protection	IP54, according to IEC 529 or IP65 optional	
Operating temperature	- 10... +60°C	
ACCESSORIES		
Potentiometer	--	1 aux. potentiometer 1 kΩ
Position indicator	Mechanical	
Auto/Man Control station and Open/Stop/Close Switch	Available	
Microswitches	2 auxiliary adjustable	2 auxiliary adjustable
Auxiliary shaft	Ø 8 mm (max. 3 Nm) or 9.5 mm (max. 3 Nm)	--
Connector	Multipolar for electrical connections	--

CE

HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

SED	CODE
POWER SUPPLY	
24 VAC ±10% (50/60 Hz)	A
115 VAC ±10% (50/60 Hz)	B
230 VAC ±10% (50/60 Hz)	C
ROTATION TORQUE / RATED TORQUE / STATIC TORQUE	
7.5 a 90° / 4 Nm / 4 Nm	0
15 a 90° / 7 Nm / 7 Nm	1
30 a 90° / 15 Nm / 11 Nm	2
60 a 90° / 20 Nm / 20 Nm	3
FEEDBACK POTENTIOMETER	
Not available	00
1 potentiometer 2.5 kΩ	15
AUXILIARY MICRO	
2 units	2
AUTO/MAN CONTROL STATION	
Auto/Man Control station and Open/Stop/Close Switch	S
ACCESSORIES/ CONTROL SIGNALS	
Input 0... 10 VDC, Output 0...10 VDC+contr.+inv.(N)	E1
Input 0... 10 VDC o 4... 20 mA, Output 0...10 VDC+ contr.+inv.(N)	E2
Input 0... 10 VDC	E4
Input 4... 20 mA	E5
Input 4... 20 mA, Output 0...10 VDC	E7
Input 4... 20 mA, Output 4... 20 mA	E8
Multipolar connectors + E(N)	MN
Rotation 160° + E(N)	6N
Rotation 180° + E(N)	8N
Auxiliary shaft Ø 8 mm + E(N)	1N
Auxiliary shaft 9.5 mm + E(N)	2N
Flange F4 + E(N)	FN
Clockwise rotation + E(N)	DN
IP65 Cable glands + E(N)	ZN

HOW TO ORDER

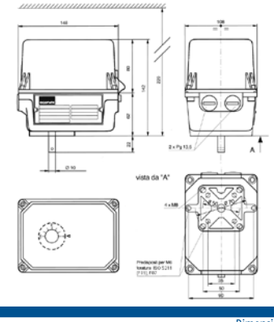
To compose the part number, pls. choose one of the option for each variable

SBD	CODE
POWER SUPPLY	
24 VAC ±10% (50/60 Hz)	A
115 VAC ±10% (50/60 Hz)	B
230 VAC ±10% (50/60 Hz)	C
ROTATION TORQUE / RATED TORQUE / STATIC TORQUE	
15 a 90° / 3 Nm / 2.5 Nm	1
30 a 90° / 3 Nm / 2.5 Nm	2
60 a 90° / 5 Nm / 3 Nm	3
AUXILIARY FEEDBACK POTENTIOMETER	
Not available	00
1 potentiometer 1 kΩ	13
AUXILIARY MICRO	
2 units	2
AUTO/MAN CONTROL STATION	
Auto/Man Control station and Open/Stop/Close Switch	S
ACCESSORIES/ CONTROL SIGNALS	
Input 0... 10 VDC o 4... 20 mA, Output 0...10 VDC+ contr.+inv.(N)	E2
Input 0... 10 VDC	E4
Input 4... 20 mA	E5
Mechanical position indicator on the cover + E (N)	0N
Rotation 180° + E(N)	8N
Clockwise rotation + E(N)	DN
IP65 Cable glands + E(N)	ZN

Note: on the auxiliary shaft the max. torque is 3 Nm to be subtracted to the rated torque.

DIMENSIONS

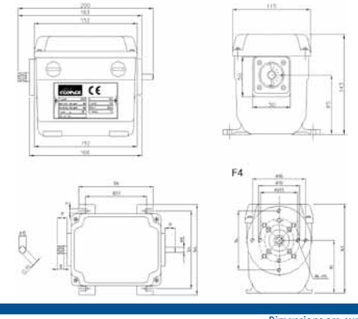
SED



Dimensions are expressed in mm

DIMENSIONS

SBD



Dimensions are expressed in mm

ELECTROPNEUMATIC CONVERTERS

EPC 30

EPC30 converter transforms the electric input signal into a proportional pneumatic signal. The good linearity associated to a high air flow, makes it perfect to be employed as interface element among electronic controllers with continuous output and pneumatic valves.

- Excellent sensibility
- Low autoconsumption and least influence to supply variations
- High air flow
- Easy and indipendent zero and span calibration
- Strong mechanic body

EPC

- ELECTROPNEUMATIC CONVERTERS
- DIN RAIL OR ON FIELD MOUNTING

FEATURES

INPUT	EPC 3020	EPC 3065
One	0...20mA/4...20mA	
Input impedance	200 Ω	
OUTPUT		
One	0.2...1 bar, 3...15 psi	
FUNCTIONAL		
Airflow	2.5 m³/h	
Characteristic	Linear, direct or reverse	
Accuracy	Better than 0.5%	
Hysteresis	Less than 0.3%	
Influence of air supply pressure	Less than 0.3% / 0.1 bar	
Influence of temperature	On the zero 0.5% / 10 ° C; on full scale 0.5% / 10 ° C	
Zero calibration	3 psi ± 3%	
Span calibration	15 psi ± 2%	
GENERAL		
Power supply	20±1.5 psi	
Air consumption	0.08 m³/h	
Weight	0.25 Kg	0.5 Kg
Mounting	On DIN rail	On field
Protection degree	IP20	IP65
Operating temperature / storage	-40... 85°C	
Operating Humidity	Less than 90% RH	

CE

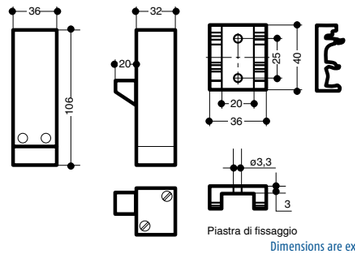
HOW TO ORDER

CODE	DESCRIPTION
EPC 3020	Input 4... 20mA - Out 3... 15ps- DIN rail - IP20 - Power supply 20PSI - Direct action
EPC 3065	Input 4... 20mA - Out 3... 15ps- On field - IP65 - Power supply 20PSI - Direct action

DIMENSIONS

EPC 3020

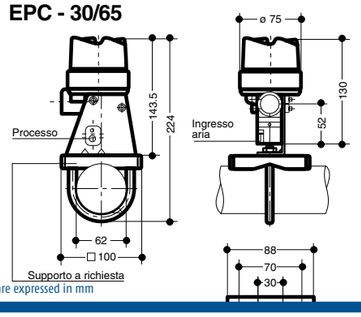
EPC - 30/20



Dimensions are expressed in mm

EPC 3065

EPC - 30/65



Dimensions are expressed in mm

ACQUISITION AND DATA RECORDING

RECORDERS

Paper and videographics

Besides the consolidated recorders with papery recording support in the sizes 100mm and 180mm, we propose videographics recorders (paperless recorder) able to offer an important added value, for instance in the mathematical functions or in the ethernet communication.

The cost difference between these two solutions is now so reduced to perfectly make them comparable among them, also in consideration of the inalterability of the digital data recorded in the memory.

RZ10000

- HYBRID CONFIGURABLE RECORDER
- WIDE DISPLAY
- 100 MM PAPER

FEATURES

DISPLAY	RZ 10000
Display	LED (7 segments, 2+5 digits)
INPUTS	
Inputs	Universal, programmable
Accuracy	Class 0.1%
OUTPUTS	
Relay	Up to 6 alarm outputs
FUNCTIONAL	
Number of pens	1, 2, 3 pens or dot matrix for 6 channels
GENERAL	
Power supply	100...240 VAC (50/60 Hz)
Power consumption	26 VA (100 V), 30...36 VA (240 V), max.: 70 VA with 3 pens, 50 VA with 6 dots
Dimensions / Weight	140 x 140 mm, depth 220 mm / 2.1... 2.5 Kg.
Mounting	On panel, panel thickness from 2 to 26 mm
Material	Steel housing and aluminum front
Front protection	IP54
Operating temperature	0... 50°C (32... 122°F)
Operating humidity	20... 80% RH without condensation
Conformity	EN61326, EN61000-3-2, EN61000-3-3, EN55011

CE

HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

RZ 10000	CODE
MODEL	
1 pen	01
2 pens	02
3 pens	03
6 channels	06
OPTIONS	
Relay alarm output (2 contacts) (*)	A1
Relay alarm output (4 contacts) (*)	A2
Relay alarm output (6 contacts) (*)	A3
RS422A/485 Serial communications (*)	C3
Ethernet (*)	C7
Calibration correction	CC1
Green display	D6
CU10, CU25 input	N1
Expansion units (**)	N3
5 contacts remote control	R1
Power supply 24 VAC/DC	P1

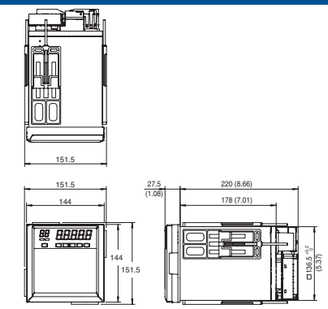
Note :

(*) The OPTIONS listed may be cumulative, with the exception of:
- A1/A2/A3: alarms are not cumulative.
- C3/C7: serial interfaces can not be selected together.

(**) N3: There are 14 types of input.

DIMENSIONS

RZ 10000



Dimensions are expressed in mm

RC10000/18000

- HYBRID CONFIGURABLE RECORDER
- WIDE DISPLAY
- 100 AND 180 MM PAPER

FEATURES

DISPLAY	RC 10000	RC 18000
Display	Graphic with LED and bargraph	Graphic with LED and bargraph VFD 181 x 16 dot matrix
INPUTS		
Inputs	Universal, programmable	
Digital inputs	Optional	
Accuracy	Class 0.1%	
OUTPUTS		
Relay	Up to 6 alarm outputs	Up to 24 alarm outputs
FUNCTIONAL		
Number of pens	1, 2, 3, 4 pens or dot matrix for 6 channels	1, 2, 3, 4 pens or dot matrix for 6, 12, 18, 24 channels
Serial communication	RS 422/485, power supply 24 VDC	RS 422/485, power supply 24 VDC
Mathematical functions	Optional	Optional
GENERAL		
Power supply	90...250 VAC (50/60 Hz)	
Power consumption	18 VA (100V), 26 VA (240V), max 40 VA	29 VA (100V), 32 VA (240V), max 70 VA
Dimensions / Weight	144 x 144 mm, depth 220 mm / 2.1... 2.5 Kg.	288 x 288 mm, depth 220 mm / 7.8... 9 Kg.
Mounting	On panel, panel thickness from 2 to 26 mm	
Material	Steel housing and aluminum front	
Front protection	IP54	
Operating temperature	0... 50°C (32... 122°F)	
Operating humidity	20... 80% RH without condensation	
Conformity	EN61326, EN61000-3-2, EN61000-3-3, EN55011	

CE

HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

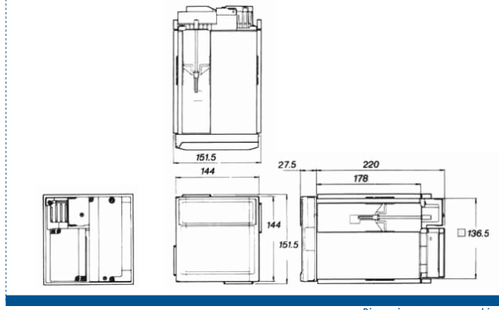
RC 10000	CODE
MODEL	
1 pen	01
2 pens	02
3 pens	03
4 pens	04
6 channels	06
OPTIONS	
Relay alarm output (2 contacts) (*)	A1
Relay alarm output (4 contacts) (*)	A2
Relay alarm output (6 contacts) (*)	A3
Header printout	BT1
RS422A/485 Serial communications (*)	C3
Ethernet (*)	C7
Calibration correction	CC1
Anomaly detection and output (*)	F1
Clamped input terminal (*)	H2
Non-glare door glass	H3
Portable version	H5
Mathematical functions	M1
CU10, CU25 input	N1
3 wires isolated RTD (*)	N2
Expansion unit (**)	N3
5 contacts remote control	R1
Power supply 24 VAC/DC	P1

Notes for RC 10000 and RC 18000:
(*) The OPTIONS listed may be cumulative, with the exception of:
- A1/A2/A3: alarms are not cumulative.
- A3/F1: can not be specified together.
- C3/C7: serial interfaces can not be selected together.
- H2/N2: can not be specified together.
  N2 is only available for the version with 6 channels.
- H5/P1: can not be specified together.

(**) N3: There are 14 types of input.

DIMENSIONS

RC 10000



Dimensions are expressed in mm

HOW TO ORDER

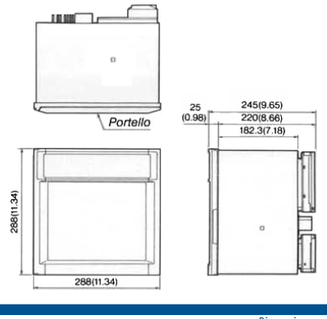
To compose the part number, pls. choose one of the option for each variable

RC 18000	CODE
MODEL	
1 pen	01
2 pens	02
3 pens	03
4 pens	04
6 channels	06
12 channels	12
18 channels	18
24 channels	24
OPTIONS	
Relay alarm output (2 contacts) (*)	A1
Relay alarm output (4 contacts) (*)	A2
Relay alarm output (6 contacts) (*)	A3
Relay alarm output (12 contacts) (*)	A4
Relay alarm output (24 contacts) (*)	A5
Header printout	BT1
RS422A/485 Serial communications (*)	C3
Ethernet (*)	C7
Calibration correction	CC1
Anomaly detection and output (*)	F1
Clamped input terminal (*)	H2
Non-glare door glass	H3
Portable version	H5
Mathematical functions	M1
CU10, CU25 input	N1
3 wires isolated RTD (*)	N2
Expansion unit (**)	N3
5 contacts remote control	R1
Power supply 24 VAC/DC	P1

Note: see notes for RC10000.

DIMENSIONS

RC 18000



Dimensions are expressed in mm

RX200 RP200

- VIDEOGRAPHIC RECORDER AND DATA LOGGER
- 2-4-6-8-10-12 CONFIGURABLE CHANNELS

FEATURES

DISPLAY	RX 200	RP 200
Display	LCD TFT 5.7"	
INPUTS		
Inputs	Universal, programmable	
Isolation between input terminals	400 V	1000 V
Accuracy	Class 0.1%	
OUTPUTS		
Relay	Up to 12 alarm outputs	
FUNCTIONAL		
Data storage	Compact Flash	
Serial communication	Ethernet (e-mail, web server, FTP client, DHCP, SNTP, ModBus TCP) RS485 ModBus Mater-Slave	
Mathematical functions	12 (ch 2 and 4), 24 (ch from 6 to 24) additional channels	
Options	Generation of periodic reports, display/data conversion, Configuring online/offline	
Wattmeter	--	Available
GENERAL		
Power supply	100...240 VAC (50/60 Hz)	
Power consumption	22 VA, max 35 VA	
Dimensions / Weight	144 x 144 mm, profondità 163 mm / 1.3... 1.4 Kg.	
Mounting	A pannello, spessore pannello da 2 a 26 mm	
Material	Involucro in metallo e frontale in policarbonato	
Front protection	IP65	
Operating temperature	0... 50°C (32... 122°F)	
Operating humidity	20... 80% RH senza condensa	
Conformity	EN61326, EN61000-3-2, EN61000-3-3, EN55011	

CE

HOW TO ORDER

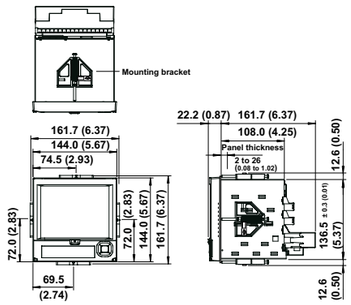
To compose the part number, pls. choose one of the option for each variable

RX 200 / RP 200	CODE
MODEL	
2 channels, interval 125 ms	02
4 channels, interval 125 ms	04
6 channels, interval 1 s	06
8 channels, interval 1 s	08
10 channels, interval 1 s	10
12 channels, interval 1 s	12
OPZIONI	
Relay alarm output (2 contacts) (*)	A1
Relay alarm output (4 contacts) (*)	A2
Relay alarm output (6 contacts) (*)	A3
Relay alarm output (12 contacts) (*)	A4A
RS232 Serial communication (*)	C2
RS422A/485 Serial communications (*)	C3
Ethernet (*)	C7
Anomaly detection and output (*)	F1
Mathematical functions (Report included) (*)	M1
3 wires isolated RTD (*)	N2
Additional inputs (PT1000 excluded) (*)	N3F
Power supply 24 VAC/DC (*)	P1
8 contacts remote control(*)	R1
24 VDC transmitter supply (2 loops) (*)	TPS2
24 VDC transmitter supply (4 loops) (*)	TPS4
USB interface (1 port)	USB1
3 points pulse input, 5 remote control contacts (Mathematical functions included) (*)	PM1
Calibration correction	CC1
Log scale	LG1
Wattmeter (Mathematical functions included) On RP200 only (*)	PWR1

Note :
(*) The OPTIONS listed may be cumulative, with the exception of:
- A1/A2/A3: alarms are not cumulative.
- C2/C3: can not be specified together.
- A3/A4: can not be specified together with F1.
- N2: is not available on 2 ch and 4 ch. version.
- R1: can not be specified together with A4A, TPS2, PM1, PWR1.
- TPS2: can not be specified together with TPS4, A2, A3, A4A, F1, R1, PM1.
- TPS4: can not be specified together with TPS2, A1, A2, A3, A4A, F1, R1, PM1.
- PM1: can not be specified together with A4A, M1, R1, TPS2, PWR1.
- PWR1: can not be specified together with A3, A4A, F1, R1, PM1, M1.
- TPS2/PWR1/A1: can not be specified together.

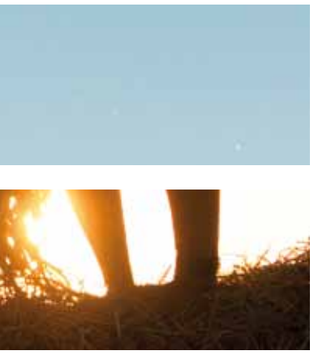
DIMENSIONS

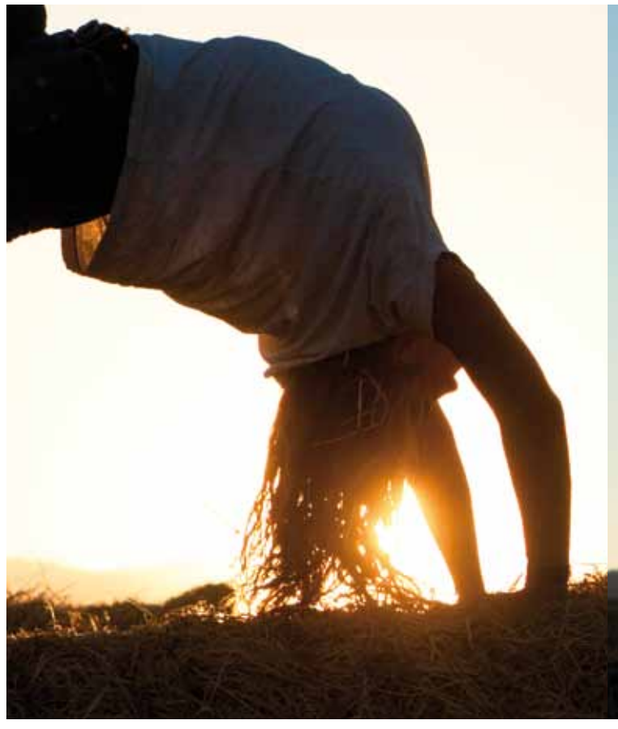
RX 200/RP200



Dimensions are expressed in mm

SENSORS AND TRANSMITTERS





TEMPERATURE

Thermoelements, non-contact sensors, transmitters

Ascon Tecnologic is specialized in designing and manufacturing any type of electric temperature transducer: thermocouples, resistance thermometers and thermistors, besides cables, threads and accessories.

There are also infrared sensors, which do not require power supply and measure the surface temperature without contact.
These sensors can be installed directly in place of conventional thermocouples to be used togather with temperature controllers, transmitters, indicators of our production.

Finally, we also offer transmitters that accept low level signals from resistance thermometers, thermocouples and sensors in mV.
In 2-wire or with universal power supply and signal output 4... 20 mA, some are available in version for head mounting.

THERMOELEMENTS

- THERMOCOUPLES
- THERMOMETERS
- THERMISTORS
- CABLES AND ACCESSORIES

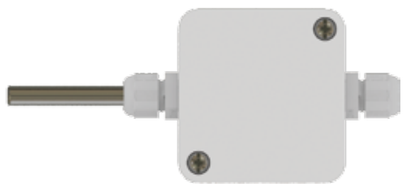
SONDE ED ACCESSORI

The correct choice of probe is often decisive for the good result of the process control.
We, at Ascon Tecnologic puts at your disposition our experience and technical competence with the purpose to find the correct solution to every application problem...

Examples of possible execution of our thermoelements:

- Probes for machines and small plants
- Flexible probes with MgO insulation
- High pressure probes with replaceable insertion
- High temperature probes with ceramic or metallic sleeve
- Accessories: nipple, thermowell, flanges and so on
- Compensated cables

Our technical team is available to discuss your requirements for custom made products. Get in touch with us.



ZIS

- INFRARED TEMPERATURE SENSORS
- IN ABS OR STAINLESS STEEL, WITH OR WITHOUT AIR PURGE

FEATURES

GENERAL	ZIS 01	ZIS 1X	ZIS 3X
Measurement report	1:1 (60 °C)		3:1 (17 °C)
Minimum measurable diameter	8 mm		6 mm
Measuring range	0... 200 °C	0... 650 °C	
Room temperature	-18... +70 °C	-18... +100°C	
Spectral response	6.5... 14 µ		
Output Impedance	3 kΩ		4... 8 kΩ
Comensazione junction	To be performed on the measuring instrument		
Emissivity	0.9 (for non-metallic surfaces)		
Repeatability	0.01 °C		
Thermal Coefficient	0.04%/ °C		
Response time	100 ms		
Resolution	0.0001 °C		
Power supply	Not needed		
MECHANICAL			
Cable	Twisted, shielded, compensated for K thermocouple (0.9 m)		
Air purge	Not available		Available
Dimensions	Ø 20 x 32.5 mm	Ø 12.7 x 36.5 mm	Ø 12.7 x 44.7 mm
Weight	40 g		
Case	ABS	Stainless steel	
Degree of protection	IP65		

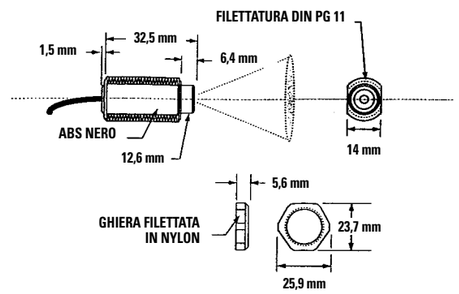
CE

HOW TO ORDER

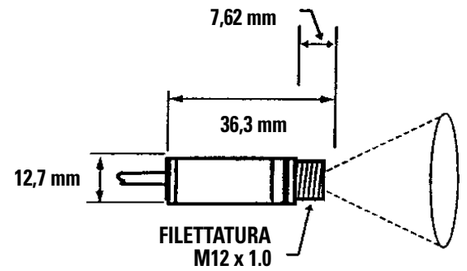
CODE	DESCRIPTION
ZIS 01 KR0_200	Powered infrared sensor in ABS 1: 1 - Range 0 ... 200 ° C
ZIS 1X KS0_650	Auto-powered infrared sensor Stainless steel - 1: 1 - Range 0 ... 650 ° C
ZIS 3X KS0_650	Auto-powered infrared sensor Stainless steel with air purge - 3: 1 Range 0 ... 650 ° C

DIMENSIONS

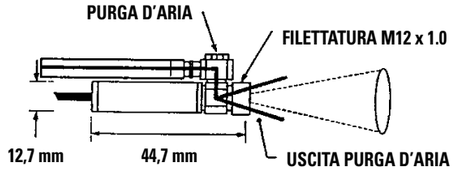
ZIS 01



ZIS 1X



ZIS 3X



Dimensions are expressed in mm

ZTT

- HEAD MOUNTING TRANSMITTERS
- PT100, TC OR UNIVERSAL INPUT

FEATURES

GENERAL	ZTT-11/RD	ZTT-11/CD	ZTT-14	ZTT-15
Input	2 or 3 wires PT100	Thermocouples K, J, E, N, T, R, S	Universal, linearized for: 2 or 3 wires PT100, TC (K, J, E, N, T, R, S, L) mV, V, mA, potentiometer. Input and output isolated from each other.	
Range	-200... +800 °C			
Output	4... 20 mA 2 wires			
Options	Programming button, LED for operation indication		Programmable burnout, ranges and unit of measurement (°C - °F)	Programmable burnout, ranges and unit of measurement (°C - °F) ATEX version
Programmability	With dedicated software and USB interface (optional)			
POWER SUPPLY				
Loop supply	10... 30 VDC		10... 35 VDC	
USB port	For power instrument and interface			
MECHANICAL				
Mounting	Head mounting			
Dimensions	Ø 43 x 21 mm			

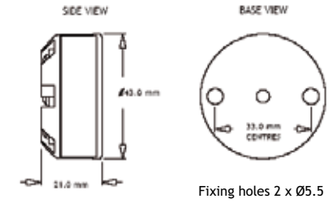
CE

HOW TO ORDER

CODE	DESCRIPTION
ZTT 11/RD	Head mounting transmitter, PT100 input
ZTT 11/CD	Head mounting transmitter, TC input
ZTT 14	Head mounting transmitter, Universal Input
ZTT 15	Head mounting transmitter, Universal Input, ATEX version

DIMENSIONS

ZTT-11/14/15



Fixing holes 2 x Ø5.5

Centre hole Ø4.0

Dimensions are expressed in mm

ZTT

- DIN RAIL MOUNTING TRANSMITTERS
- PT100, TC OR UNIVERSAL INPUT




FEATURES

GENERAL	ZTT-51/GD	ZTT-52/GD	ZTT-53/GD	ZTT-50/GD
Input	2 or 3 wires PT100 Input and output isolated from each other.	mV and thermocouples K, J, E, N, T, R, S Input and output isolated from each other.	Universal, linearized for: 2 or 3 wires PT100, TC (K, J, E, N, T, R, S) mV, V, mA, Input and output isolated from each other.	Universal, linearized for: 2 or 3 wires PT100, TC (K, J, E, N, T, R, S, L, B, U, C, D, W) mV, V, mA, potentiometer. Input and output isolated from each other.
Range	-200... +800 °C			
Output	4... 20 mA 2 wires			
Options	SMART, programmable Programmable burnout, ranges and unit of measurement (°C - °F)		SMART, programmable with USB on the front Programmable burnout, ranges and unit of measurement (°C - °F)	
Programmability	With dedicated software and USB interface (optional)			
POWER SUPPLY				
Loop supply	10... 30 VDC		11... 30 VDC	22... 253 VAC/DC
USB port	For power instrument and interface			
MECHANICAL				
Mounting	On DIN rail			
Dimensions	17.5 x 90 mm, depth 56.4 mm			22.5 x 106 mm, depth 120 mm

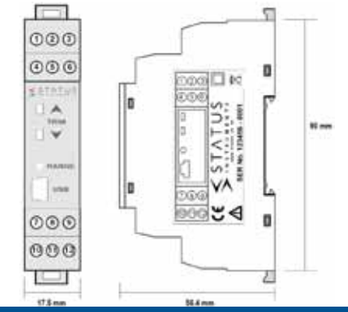
CE

HOW TO ORDER

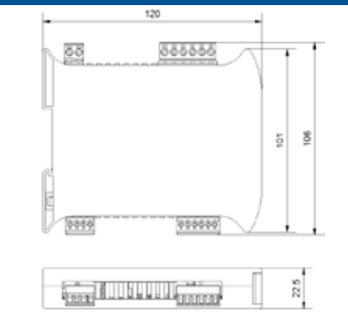
CODE	DESCRIPTION
ZTT 51/GD	DIN rail mounting transmitter, PT100 input
ZTT 52/GD	DIN rail mounting transmitter, mV and thermocouples input
ZTT 53/GD	DIN rail mounting transmitter, universal Input
ZTT 50/GD	DIN rail mounting transmitter, Universal and potentiometer input

DIMENSIONS

ZTT-51/52/53



ZTT-50



Dimensions are expressed in mm

UMIDITY

Relative humidity and temperature-humidity transmitters

A full range of Relative Humidity transmitters with or without a temperature sensor. Capacitive sensors used in these transmitters have as main characteristic the stability in time and the perfect integration of the temperature compensator.

Also available models with digital capacitive sensor interchangeable without calibration/ adjustment, with current and/or voltage outputs with or without alarms, LCD and serial communication.

TRH

- RELATIVE HUMIDITY AND HUMIDITY + TEMPERATURE TRANSMITTERS
- WALL MOUNTING




FEATURES

GENERAL	TRH 20	TRH 22	TRH 11	TRH 32
Humidity sensor	Capacitive-digital		Capacitive	
Temperature sensor	--	NTC thermistor	--	PT100 thermoresistance (class B)
Humidity range	5... 95% RH (4.8... 19.2 mA)	5... 95 %RH (4.8... 19.2 mA)	0... 100% RH (4... 20 mA)	0... 100 %RH (4... 20 mA)
Temperature range	--	-10... 70 °C / 14... 158 °F (7.2... 20 mA)	--	-30... 70 °C/-22... 158 °F) (4... 20 mA)
Humidity output	4... 20 mA (0... 100% RH)			
Temperature output	--	4... 20 mA (-30... 70 °C / -22... 158 °F)	--	4... 20 mA (-30... 70 °C / -22... 158 °F)
Humidity overall accuracy	± 3% (20... 80% RH); ± 5% (5... 20, 80... 95% RH) without the presence of pollutants at 23 °C and air speed 3 ms		±2% (10... 95% RH); ±3% (0...10/ 95... 100% RH) without the presence of pollutants at 23 °C and air speed 3 ms	±1.5% (10... 95% RH), ±2% (0...10/ 95...100 % RH) without the presence of pollutants at 23 °C and air speed 3 ms
Temperature overall accuracy	--	± 1.5 °C	--	±0.9%
Further error in presence of pollutants	--		± 2% RH	
Response time	30 sec (at 23 °C and air speed 3 ms)		30 sec to reach 63% of the variation (at 23 °C and air speed 3 ms)	
Recovery time after saturation	--		90 sec. approx.	
Maximum air speed	--		20 ms	
Temperature compensation	--		By means of NTC thermistor	
POWER SUPPLY				
Power supply	8... 24 VDC		9... 30 VDC	
MECHANICAL				
Mounting	On wall			
Air filter	Wire mesh		Polyethylene	
Dimensions	Ø 20 x 185 mm		80 x 80 mm, depth 52 mm	
Case protection degree	IP65			
Connections	With flexible non separating cable in PVC 2 x 0.25 mm² Lenght 1.5 m		Screw terminals 2.5 mm²	
Recommended cable for connection	--		2 x 0.75 o 2 x 1 mm²	

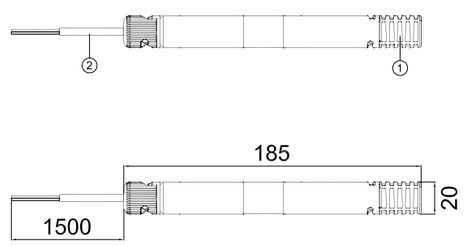
CE

HOW TO ORDER

CODE	DESCRIPTION
TRH 20	Probe Humidity 5 ... 95% 4 .. 20 mA output Cylindrical execution
TRH 22	Probe Humidity 5 ... 95% + Temperature 4 .. 20 mA output Square execution
TRH 11	Humidity sensor 0 ... 100% 4 .. 20 mA output Cylindrical execution
TRH 32	Humidity sensor 0 ... 100% +Temperature 4 .. 20 mA output Square execution

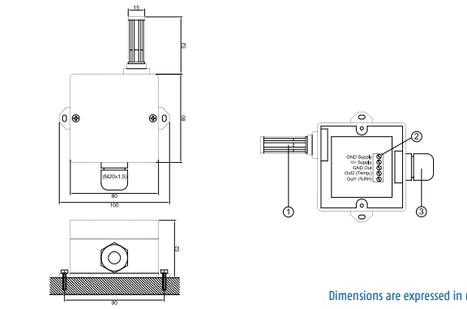
DIMENSIONS

TRH20/ TRH22



Dimensions are expressed in mm

TRH11/ TRH32



Dimensions are expressed in mm

H1/3/5

- HUMIDITY + TEMPERATURE TRANSMITTERS
- WITH CAPACITIVE SENSOR AND INTERCHANGEABLE FILTERS

FEATURES

DISPLAY	H1	H3	H5
LCD	Optional, digit height 10.5 mm	Optional, 3 lines of 16 characters, digit height 3.65 mm	
Display	0.0... 100.0% RH	For configuration messages and indications: RH Humidity: 0.0 ... 100.0% RH, Temperature T: -30.0 ... + 100.0 ° C	
OUTPUTS			
Number of outputs	3	2, isolated from each other: humidity + temperature	
Humidity output	4...20 mA a 2 wire (max. 500 Ω) or 0...10V (min. 500 Ω)	4...20 mA (max. 500 Ω) or 0... 10 V, 0... 1 V, (min. 500 Ω)	0/4...20 mA (max. 500 Ω) or 0... 10 V, 0... 1 V, 0... 5V (min. 500 Ω)
Humidity range	0...100% RH		
Humidity tolerance	1.8% between 10... 90% RH		
Humidity long-term drift	Typically <0.5% RH / year		
Temperature output	4...20 mA a 2 wire (max. 500 Ω) or 0...10V (min. 500 Ω) Also available in 3 wire Pt100	4...20 mA (max. 500 Ω) or 0... 10 V, 0... 1 V, (min. 500 Ω) Also available in 3 wire Pt100	0/4...20 mA (max. 500 Ω) or 0... 10 V, 0... 1 V, 0... 5V (min. 500 Ω) Also available in 3 wire Pt100
Temperature range	-30...+70°C, -20...+30°C, 0...+50°C, 0...+100°C	-30...+70°C, -20...+30°C, 0...+50°C, 0...+100°C	
Temperature tolerance	Output 4...20 mA <0.5°C between -20...80°C, Output 0...10V <0.5°C between 0...50°C		
Terza uscita	Pt100 a 3 wire	--	
GENERAL			
Power supply	18...27 VAC or 20... 30 VDC		
Power consumption	2 W max.		
Calculation of dew point	--		Calculation of the dew point and of the difference between the temperature measured and the dew point
Alarms	--		5 alarms associated to the user 1 SPST relay output 1A at 30 V
Memory	--		Storing data and events
Serial communication	--		Isolated RS485 3 wire, Modbus RTU Slave protocol
MECHANICAL			
Case dimensions	100 x 100 mm, depth 61 mm		
Glandes footprint	35 mm max.		
Probe connector footprint	25 mm		
Case protection degree	IP66		

HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

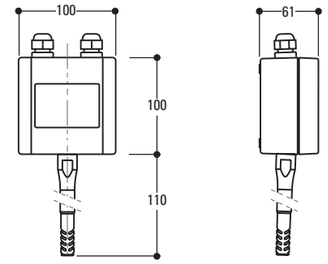
H1/ H3/ H5	CODE
CASE	
Wall mounting Ø 20 - L = 110 mm	P0
Duct Ø 20 - L = 200 mm	C2
Duct Ø 20 - L = 500 mm	C5
Remote mount cable 10 m	R1
Remote mount cable 2 m	R2
Remote mount cable 5 m	R5
STEM PROBE MATERIAL	
Stem plastic PVDF	0
FILTER	
Dithered stainless steel filter	R
Sintered stainless steel filter	S
Teflon filter	T
HUMIDITY OUTPUT	
Not available	0
4... 20 mA/0... 100% RH	1
0... 10 V/0... 100% RH	2
0... 1 V/0... 100% RH - Models H3 and H5 only (*)	3
TEMPERATURE OUTPUT	
No output	0
4... 20 mA	1
0... 10 V	2
0... 1 V - Models H3 and H5 only (*)	3
Dew point - 4... 20 mA - Model H5 only (**)	4
Dew point - 0... 10 V - Model H5 only (**)	5
Dew point - 0... 1 V - Model H5 only (**)	6
Temperature difference - 4... 20 mA - Model H5 only (**)	7
Temperature difference - 0... 10 V - Model H5 only (**)	8
Temperature difference - 0... 1 V - Model H5 only (**)	9
PT100 according to IEC751	P
TEMPERATURE RANGE	
Not defined	0
-30... +70°C	1
-20... +30°C	2
0... +50°C	3
0... +100°C	4
CONNECTIONS	
Terminal block	M
DISPLAY	
No display	0
Built-in LCD display	D
THIRD OUTPUT PT100	
No output	0
PT100 - H1 only	P
SERIAL COMMUNICATION	
Not available (on H1)	0
Available - Model H3 and H5 only	5

Note :
(*) Options available just on model H3 and H5.
(**) Options available just on model H5.

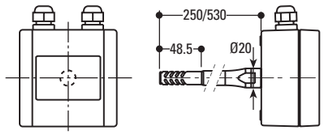
DIMENSIONS

H1/ H3/H5

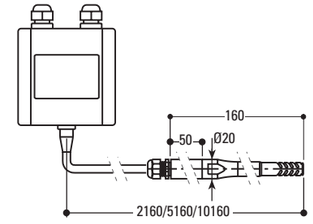
A parete



In condotta



Con sensore remoto



Dimensions are expressed in mm

HL/HS

- HUMIDITY + TEMPERATURE TRANSMITTERS
- WITH CAPACITIVE SENSOR AND INTERCHANGEABLE FILTERS
- VERSION FOR ARTIFICIAL SNOWMAKING

FEATURES

OUTPUTS	HL	HS
Number of outputs	2 high level outputs insulated from each other	
Humidity output	4...20 mA 2 wires (max. 500 Ω)	
Humidity range	0...100% RH	
Humidity tolerance	2.5% between 10... 90% RH	2.2% between 10... 90% RH
Humidity long-term drift	Typically <1% RH / year	Typically <0.5% RH / year
Temperature output	4...20 mA 2 wires (max. 500 Ω)	4...20 mA 2 wires (max. 500 Ω), also available in 3-wire Pt100
Temperature range	-30...+70°C, -20...+30°C, 0...+50°C, 0...+100°C	-20...+30°C, -40...+60°C
Temperature tolerance	±0.3°C	
POWER SUPPLY		
Power supply	12... 30 VDC	
Power consumption	2 W max.	
MECHANICAL		
Case dimensions	Ø 85 x 58 mm	Ø 30 max. x 258 mm
Glandes size	43 mm max.	--
Probe connector size	17 mm	Ø 30 max. x 70 mm
Stem for wall mounting	130 x Ø20	--
Stem for duct mounting	270... 550 x Ø20 mm	--
Case protection degree	IP66	Not available

CE

HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

HL	CODE
CASE	
Wall mounting Ø 20 - L = 110 mm	P0
Duct Ø 20 - L = 200 mm	C2
Duct Ø 20 - L = 500 mm	C5
FILTER	
Dithered stainless steel filter	R
Sintered stainless steel filter	S
Teflon filter	T
TEMPERATURE OUTPUT AND RANGE	
No output	0
4... 20 mA / Range -30... +70°C	1
4... 20 mA / Range -20... +30°C	2
4... 20 mA / Range -0... +50°C	3
4... 20 mA / Range -0... +100°C	4

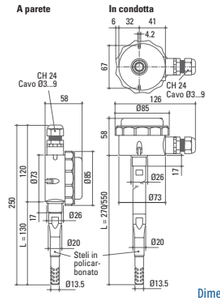
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

HS	CODE
FILTER	
No filter	0
Dithered stainless steel filter	R
TEMPERATURE OUTPUT	
No output	0
4... 20 mA / Range -20... +30°C	2
4... 20 mA / Range -40... +60°C	5
4... 20 mA / Range -40... +80°C	C
PT100	P

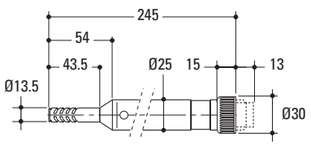
DIMENSIONS

HL



Dimensions are expressed in mm

HS



Dimensions are expressed in mm

ZH

- HUMIDITY AND TEMPERATURE TRANSMITTER
- CAPACITIVE SENSOR + CONVERTER

FEATURES

SENSOR	ZH 10-	ZH 20-
PART NO. DETAILS	ZH HC2-S (SENSOR)+ AZH HF5 (CONVERTER)	ZH HC2IC (SENSOR) + AZH HF5 (CONVERTER) + AZH SP (FILTER)
Range	-50... 100°C / 0...100% RH	-100... 200°C / 0...100% RH
Accuracy	±0.8% RH, ±0.1K at 23°C ±5K	
OUTPUTS		
Analog outputs	Digital interface (UART) and scalable analog outputs, 0... 1 V	
Output configuration	0... 1V = -40... 60°C/ 0... 100% RH	
Calibration	At 23°C and 10, 35, 80 % RH	
GENERAL		
Power supply	3.2...5 VDC, calibrated at 3.3 VDC	3.3 VDC ±0.1 VDC
Power consumption	4.5 mA approx.	
Sensor Type	HYGROMER® IN-1 ROTRONIC, Pt100 Class A	
Filter Type	Polyethylene, 20 pm, gray colour	Metal mesh (CODE AZH SPM15)
Response time	‹ 15 s, without filter	
MECHANICAL		
Case dimensions	Ø 15 x 83 mm	Ø 15 x (100, 250, 400, 550, 700) mm or Ø 15/25 x (250, 400, 550, 700) mm
Case material	Polycarbonate	PEEK, brass nickel plated
Weight	10g	230... 380 g

CONVERTER	AZH HF5		
PART NO. DETAILS	HF520 (2 WIRES)	HF53/4 (3/4 WIRES)	HF56X (3/4 WIRES HIGH CURRENT)
Communication interface	UART		
Analog outputs	2 x 4... 20 mA	2 x 0/4... 20 mA or 0... 1/5/10 V	
Digital output: RS485	n.a.	RS485 and analogue	
Digital output: USB	n.a.	USB, RS485 and analogue	
Digital output: Ethernet	n.a.	Ethernet RJ45, RS485 and analogue	
Digital output: Wireless	n.a.	Wireless, RS485 and analogue	
GENERAL			
Power supply	10... 28 VDC	15...40 VDC/12... 28 VDC gal. sep. 9... 36 VDC/7... 24 VAC	85... 240 VAC
Power consumption	2 x 20 mA max.	270 mA max.	30 mA max.
Humidity sensor type	HYGROMER® IN-1 ROTRONIC, Pt100 Classe A		
Humidity operating range	0... 100% RH		
Humidity accuracy	±0.8% RH ±5K		
temperature sensor type	Pt100 Class A		
Temperature operating range	-50... 100°C/-48... 212°F		
Temperature accuracy	±0.1K a 23°C ±5K		
MECHANICAL			
Case dimensions	129 x 72 mm, depth 45 mm	192 x 102 mm, depth 52 mm	129 x 72 mm, depth 45 mm
Case material	ABS		
Protection degree	IP65 (USB or Ethernet model: IP40)		
Weight	220 g		500 g

CE

HOW TO ORDER

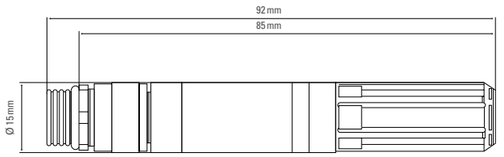
CODE	PROBE + CONVERTER DESCRIPTION	
ZH 10	ZH HC2-S	Humidity + temperature probe - Wall mounting - Ø 15 x 83 mm -50... +100°C / 0... +100 % RH - Power supply 3.2... 5 VDC
	AZH HF5 (xx)	Converter

CODE	PROBE + CONVERTER + FILTER DESCRIPTION	
ZH 20	ZH HC2IC (*) (xx)	Humidity + temperature probe - Wall mounting -30... +70°C Out 4... 20 mA 2 wires Power supply 3.3 VDC (*) see table below for details about dimensions (xx) = cable lenght
	AZH HF5 (xx)	Converter
	AZH SPM15	Filter

ZH 20	CODE
ZH HC2IC (*) (XX) - DIMENSIONS	
Ø 15 x 100 mm	1
Ø 15 x 250 mm	3
Ø 15 x 400 mm	4
Ø 15 x 500 mm	5
Ø 15 x 700 mm	7
CABLE (XX)	
To be specified in meters (02, 05, etc...)	XX

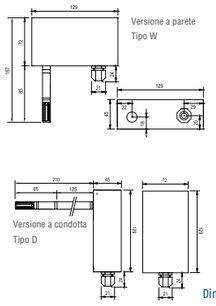
DIMENSIONS

SENSOR



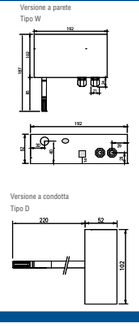
Dimensions are expressed in mm

ZH 10



Dimensions are expressed in mm

ZH 20



Dimensions are expressed in mm

PRESSURE, FLOW, LEVEL

Pressure, flow and level transmitters

Pressure transmitters can be used for flow and level measurements too.
Various type of sensors: ceramic, piezoresistive and capacitive.

TPRC

- ABSOLUTE, RELATIVE, VACUUM PRESSURE TRANSDUCERS
- FOR INDUSTRIAL USE

FEATURES

GENERAL	TPRC
Range	2... 1000 bar (and intermediate range)
Output	4...20 mA 2 wires or 0...10V 3 wires
Pressure measurement	Absolute, relative, vacuum
Power supply	8... 32 VDC or 13... 32 VDC
MECHANICAL	
Process connection thread	1/4" G male, 1/8" G male, 7/16"-20 UNF male and female
Electrical connection	M12 plug, Packard, mPm, cable
Material	AISI316L

CE

HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

TPRC	CODE
RANGE	
0.5... 8 bar	1
0... 30 bar	2
PROCESS THREAD	
Male 7/12 20 UFN M.	A
Male 1/4 GAS	B
TERMINALS	
Cable 1.5 m	A1
Connector	C0
OUTPUT	
4... 20 mA	C
0...10 V	V

Note :
For pressure ranges or features not shown in the table, please contact our sales office.

TP1/3/4

- PRESSURE TRANSMITTERS FOR INDUSTRIAL USE
- CERAMIC/PIEZORESISTIVE SENSOR
- VERSION WITH DISPLAY

FEATURES

DISPLAY	TP1	TP3	TP4
LCD	--		Optional
Indication	--		With digital display and buttons for local configuration
GENERAL			
Operating pressure range	Between 0... 0.1 bar and 0... 1000 bar Vacuum version : Between -0.5... 0 bar and -y... x bar (special calibrations available on request)		
Pressure measurement	Absolute, relative, vacuum		
Output	4...20mA two-wire technology, 21.5 mA max.		
Process connection thread	1/4" G, 1/4" NPT, 3/8" G, 1/2" G, 1/2" NPT (Others on request)	1/4" G, 1/4" NPT, 3/8" G, 1/2" G, 1/2" NPT, flange Ø79, others on request (ceramic sensor); 1/4" G, 1/4" NPT, 3/8" G, 1/2" G, 1/2" NPT, 1/2" G sep. M44, 1/2" NPT sep. M44, 1/2" G sep. M75, 1/2" NPT sep. M75, 1/2" G flush diaphragm, 1" G flush diaphragm, 1"1/2 G flush diaphragm, 2" G flush diaphragm, DIN nut DN 25, DIN nut DN 40, DIN nut DN 50 Triclamp 1"1/2, Triclamp 2", Triclamp 2"1/2, Flange S0, Flange Ø 79, others on request (piezoelectric sensor)	1/2" G, 1/2" NPT, flange Ø79, others on request (ceramic sensor), 1/2" G, 1/2" NPT,1/2" G sep. M44, 1/2" NPT sep. M44, 1/2" G sep. M75, 1/2" NPT sep. M75, 1/2" G flush diaphragm, 1" G flush diaphragm, 1"1/2 G flush diaphragm, 2" G flush diaphragm, DIN nut DN 25, DIN nut DN 40, DIN nut DN 50, Triclamp 1"1/2, Triclamp 2", Triclamp 2"1/2 , flange S0, flange Ø 79, others on request (piezoelectric sensor)
Power supply	10...30 Vdc	12...40 Vdc	12...35 Vdc
Protection	Against reversed polarity		
MECHANICAL			
Case	Steel	Painted aluminum	Stainless Steel AISI 316
Operating temperature / humidity	-40...80°C /0... 98% UR		
Degree of protection	IP65/67		IP67
ATEX certification	--	--	Available

CE

HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable, considerando la disponibilità dell'opzione qui sotto riportata:

DESCRIPTIONS	CODE	TP1		TP3		TP4	
CABLE LENGHT		CERAMIC	PIEZO	CERAMIC	PIEZO	CERAMIC	PIEZO
Without cable	0						
1 m (remote electronic board)	1						
2 m (remote electronic board)	2				•		
5 m (remote electronic board)	5						
10 m (remote electronic board)	A						
PROCESS CONNECTION							
1/4" G/BSP/PF-M	F10	•	•				
1/4" NPT-M	F11	•	•				
3/8" G-M	F12						
1/2" G/BSP/PF-M	F13				•		
1/2" NPT-M	F14						
1/2" G-M (diaphragm M44)	F43		•		•		•
1/2" NPT-M (diaphragm M44)	F44		•		•		•
1/2" G-M (flush diaphragm)	FM3		•		•		•
1" G-M (flush diaphragm)	FM5				•		
1 1/2" G-M (flush diaphragm)	FM6		•		•		•
2" G-M (flush diaphragm)	FM7		•		•		•
DIN nut DN 25	GD2		•		•		•
DIN nut DN 40	GD4		•		•		•
DIN nut DN 50	GD5		•		•		•
Triclamp 1 1/2" diaphragm Ø 26	TC6		•		•		•
Triclamp 2"	TC7		•		•		•
Triclamp 2 1/2"	TC8		•		•		•
Flange S0	FS6		•		•		•
Flange Ø 79mm	FL8				•		
Special	SPx				On request		
PRESSURE							
Relative	R						
Absolute	A				•		
Vacuum	V						
RANGE							
Value to be specified	xxxx				•		
OPTIONS							
None	---				•		
Intrinsecal safety Eex ia IIC T5/T6 (PTB)	ATX						•
Display	D--						
Tinned extension for high temperature 190°C	-HT				•		•
Extension (-HT) + straight connector M12	HTC						
Extension (-HT) + cooling siphon (R18)	HTR						
Impregnated execution	IMP						
Inverted output signal	INV				•		•
Welded version	--N						
Cooling siphon L=180mm. AISI316	R18		•		•		•
Connection 1/4 NPT damper+wreath+bracket	SMZ				•		•
Special calibration + intrinsecal safety	TSA						•
Special calibration + impregnated execution	TSI				•		•
Special calibration + welded version	TS0						
Special calibration + cooling siphon (R18)	TSR						
Special calibration	TSS				•		•
Special calibration + extension (-HT)	TST				•		•
Output 0...10 V (*)	-V9						

PT31

- DIFFERENTIAL TRANSMITTER
- PRESSURE, FLOW AND LEVEL

FEATURES

GENERAL	PT31
Range	-1.5... +1.5 kPa; -7.5... +7.5 kPa; -186.5...+186.5 kPa (others on request)
Output	4... 20 mA (2 fili), 4 ... 20 mA (2-wire), configurable with or without HART communication protocol
Pressure measurement	Differential, absolute and relative
Power supply	11.9... 45.9 Vdc
MECHANICAL	
Filling Fluid	Silicone fluid (others on request)
Degree of protection	IP67 (standard) or ATEX flameproof
Options	On request Various construction materials for the accessories (flanges, purges and membranes)
Operating temperature	-40... +85°C (-30... +80°C with LCD)
Humidity	5...100% RH

CE

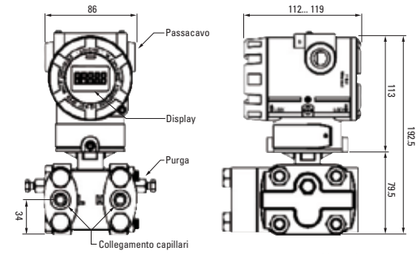
HOW TO ORDER

To compose the part number, pls. choose one of the option for each variable

PT31	CODE
PRESSURE	
Differential	D
Relative	G
MEASURING RANGE	
-1.5... +1.5 kPa (-15... +15 mbar)	2
-7.5... +7.5 kPa (-75... +75 mbar)	3
-186.5...+186.5 kPa (-1865... +1865 mbar)	5
Other ranges available on request	X
MATERIALS	
Wet parts: 316 SST Process connection: 316 SST, Diaphragm: 316L SST	M11
Wet parts: 316 SST Process connection: 316 SST, Diaphragm: HAST-C	M12
Wet parts: 316 SST Process connection: 316 SST, Diaphragm: Monel	M13
Wet parts: 316 SST Process connection: 316 SST, Diaphragm: Tantalum	M14
DEGREE OF PROTECTION	
IP67 (standard)	K0
ATEX flameproof	E1
FILLING FLUID	
Silicone	1
PROCESS CONNECTION	
1/2" NPT with flange adapter 1/4" NPT	0
ELECTRICAL CONNECTION	
1/2" NPT F	1
OPTIONS	
To be defined	XX

DIMENSIONS

PT31



Dimensions are expressed in mm

ALPHABETICAL INDEX

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NOTE

NOTE

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